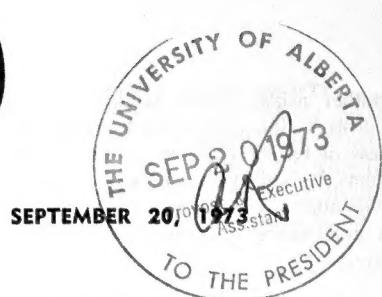


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THE UNIVERSITY OF ALBERTA STAFF BULLETIN

EDMONTON, ALBERTA



1973 TORY LECTURE

Homo sapiens may be losing his wisdom teeth and little toes, but his desire to know more about himself is still very much intact. Almost 1,000 people crowded into Dinwoodie Lounge last week to hear the 1973 Henry Marshall Tory Lecture delivered by PHILLIP V. TOBIAS, Head of the Department of Anatomy at the University of the Witwatersrand in Johannesburg, South Africa. In "IQ and the Nature-Nurture Controversy," Dr. Tobias discussed the effects of genes and environment on a person's intelligence.

Excerpts from his address follow:

The nature-nurture controversy is often summarized in oversimplified and mistaken terms as: heredity *versus* environment. By nature is meant here one's genetic inheritance and by nurture one's upbringing and all the relevant factors in one's environment. The word *versus*—in the phrase heredity *versus* environment—implies a kind of opposition or opposition between the two ideas. And it is a widespread misconception that the two concepts are irreconcilable, and that if one is an adherent of the one idea, one cannot also accept the other; if one is an environmentalist one cannot be an hereditarian, let alone a geneticist . . . At the present time, this problem of genetics and environment, briefly stated, is a question of deciding, for any one trait, whether it is determined genetically, or environmentally, or by both genes and environment. If by both, one goes on to enquire in what proportions nature (the genes) and nurture (the environment) contribute to the trait in an individual and to its variability in a group of individuals. Another part of the question is: how do genes and environment interact with each other in determining those traits where both sets of factors play a part? . . .

Since 1969, educational psychologists have argued, often giving off more heat, I fear, than light, about the extent to which the measured IQ is determined by genes rather than by the environment . . . It is contended by some that American blacks are genetically inferior in intelligence to American whites. Others have gone on to generalize from this claim to all blacks and all whites . . .

The recent spate of writings on this knotty subject was triggered off by a lengthy article by Dr. Arthur Jensen, a professor of

educational psychology at Berkeley who . . . puts forward the hypothesis that "genetic factors are strongly implicated in the average Negro-white intelligence difference . . . No one has yet produced any evidence based on a properly controlled study to show that representative samples of Negro and white children can be equalized in intellectual ability through statistical control of environment and education."

CRITICISMS OF JENSEN'S VIEWS

Are IQ test scores a valid measure of intelligence? No. They may be based on various measures of intellect. Different results are obtained, according to the test used . . .

A most serious criticism is Jensen's disregard of several subtle environmental influences, which are known to participate in the complex network of causal relationships. In his 1969 paper, Jensen speaks of controlling the SES (socio-economic status) of the whites and blacks being compared; but he does not attempt to control less blatant environmental influences, such as parental solicitude and warmth of interpersonal relationships in the home. These more subtle influences do not vary only within the SES. They are pertinent variables in their own right. Several studies have shown that these factors influence IQ test performance . . .

When Jensen states that, for instance, socio-economic status has been controlled, he means controlled at the moment in time when the investigation begins. Yet the study of a child at the age of, say, 10 or 12 years—when its family may have attained a reasonable socio-economic status—tells us nothing about the position when the child was passing

through its critical, formative, postnatal years. Also, it tells us nothing about adverse dietary and other stress factors that may have operated in the prenatal period. The fact of present adequacy of status does not preclude serious inadequacies in previous years. Yet inadequacies earlier in the long period of growth and maturation may have had serious effects on the nervous system and subsequent behavioural patterns. The earlier their impact, the less reversible their effects appear to be . . .

The effect of the attitude of the test-takers toward the testers has been overlooked. Yet there is much evidence that it cannot be excluded . . . When tested by whites, black subjects scored, on the average, 5 or 6 points lower than the level they reached if a black person tested them . . . The race of the tester was not the only attitudinal factor affecting the performance of subjects in psychological tests: others were the examiner's age, sex and socio-economic status, as compared with the age, sex and SES of the test-takers . . . Yet allowance has not been made for these factors in the studies which have provided the source material for Jensen's hypothesis. In other words, the claimed difference in IQ test scores of 1 standard deviation is probably an exaggeratedly high estimate of the difference, because of the neglect of the need to control for these correlated variables. Yet the claimed difference of 1 standard deviation is the starting point for Jensen's hypothesis—that a difference of 1 standard deviation is too big ever to be caught up by environmental and educational equalization.

(Continued on page two)

APPOINTMENT

L. P. MILLIGAN, *Associate Professor of Animal Biochemistry, has been appointed to a five-year term as Chairman of the Department of Animal Science, effective September 1, 1973. Dr. Milligan holds a BSc and an MSc from this University and a PhD from the University of California. He is currently studying methods of feed preservation and feed efficiency. His work on non-protein nitrogen utilization is particularly relevant to a potential world shortage of protein for humans, and to the problems created for Alberta cattle breeders by the recent United States export embargo on soybean meal. Dr. Milligan has been on the staff here since 1966.*



Another aspect which Jensen tends to play down is the current controversy over the fairness of testing children of one group with IQ items devised by members of another Despite attempts to eliminate cultural bias from intelligence tests, this has not been achieved.

Dr. Tobias cited a number of studies on separated identical twins, which he called "God's gift to the geneticist." He concluded:

Heritability is a relative—not an absolute—matter, although Jensen considers it an absolute measure. It varies depending on the diversities of environments

Although it is very likely that there is an appreciable genetic factor in the variability of at least some of the component traits assessed by various IQ tests, it is scientifically unjustified to assign to it a precise quantitative value (like Jensen's 80 percent), to apply such value to all within-group and between-group comparisons, and then to base inferences and prescriptions for social action or non-action on such value. Hence, it is not valid to infer that, "because of such high heritability," members of a disadvantaged population cannot hope to elevate their new mean test scores by as much as 1 standard deviation by the elimination of all environmental differentials. This is a fundamental flaw in Jensen's use of the genetical concept of heritability: this glaring misuse of the concept, *on its own*, invalidates the methodology used by Jensen and, therefore, his entire hypothesis. When to this objection are added all the other criticisms I have mentioned, there is no option on presently available evidence but to reject Jensen's hypothesis

In the words of Sandra Scarr-Salapatek, "To assert, despite the absence of evidence and in the present social climate, that a particular race is genetically disfavored in intelligence is to scream 'FIRE . . . I think' in a crowded theatre. Given that so little is known, further scientific study seems far more justifiable than public speculations."

Dare we sit back and declare, as Jensen has done prematurely on inadequate evidence, that blacks will never catch up their IQ deficit? Ought we not, rather, try to produce quantitatively and qualitatively improved education over several successive generations? and education of adults as well as of schoolchildren? The results may be amazing.

In the meantime it must, after all, be admitted that science has not yet validly demonstrated any *genetically determined* differences in kinds of nervous systems, patterns of behaviour or level of attainment among the races.

been argued time and again (often somewhat condescendingly) that a university is a major contributor to the cultural life of *any* community.

Yet too often recently such numbers have been the only citation of involvement in community life. In most instances they are brought forward to support the request for public financial support, so desperately needed to complete the educational facilities and goals planned in the '60s.

If figures are to be used, another set of them indicates that faculty and staff of the University wish to pay little more than lip-service to the concept of community integration. The example is The United Way. A fund-raising campaign familiar to most of us, The United Way annually solicits public funds for the maintenance of 44 member agencies, each of which provides some service to the community.

Attitudes toward The United Way are as varied as the people on the campus. Many resent the campaign and show it by refusing their support. Others take it on as a matter of course; still others contribute not only money but time and ideas. There are some who would prefer a general raise in taxes and an outlawing of such fund drives; more than a few think it's no concern of theirs. All of us, however, have listened to the publicity and have made our choices individually, as we should.

Organizers of the campaign emphasize that "giving is a personal matter. No one wants to be told what they should donate" The suggested guideline, they say, ranges from one-half of one percent up to about two percent, depending on the level and ability to give.

What are the numbers here? The annual payroll of The University of Alberta is approximately \$50 million. In 1972 the faculty and support staff of the University gave less than \$50,000 to The United Way. That's one-tenth of one percent of the payroll.

There is a point to be made here. If The University of Alberta continues to require public money and wishes to demonstrate its involvement in the community, it should show collectively that it is willing to return the responsibility in the form of some community concern. The United Way is one — though not the only — tangible effort.

If the University contributed as little as one-quarter of one-percent (about \$100,000) it would become one of the largest regional donors anywhere in Canada. By itself, this would be nothing to brag about. But the possibility is, at the least, worth some thought.

The Stone Owl



THE UNIVERSITY AND THE COMMUNITY: INTEGRAL PARTS?

By MURRAY S. COOKE, *Director of Personnel Services and Staff Relations, and Vice-Chairman of the Educational Division of The United Way.*

In recent years a great deal of discussion has been generated about the role of the University in the community and vice versa. Most of us who are part of the University community are familiar with the traditional "ivory tower" concept; we are equally aware that the towers have since been coming down, some with a crash, others bit by bit. The community at large, however, is perhaps less aware of this than it could or should be. And in view of the constant need by the University for public funds, this is potentially dangerous. Perhaps the University has not been doing all it could or should, in the same regard, to demonstrate that it *is* part of the community.

What kind of proof do we need to show that The University of Alberta is an integral part of the City of Edmonton? What, for example, about numbers?

The University is an employer of significant proportions in Edmonton. More than 5,500 faculty and staff, full- and part-time, are employed on campus. In 1971-72, according to the Report of the Governors, this group was augmented by 18,243 full-time and 8,500 part-time students. Allowing for some overlap, the total exceeds 30,000. Add direct and indirect dependents, including suppliers and service persons, and the total likely is more than 75,000, about 14 percent of the population of Edmonton. On the basis of numbers alone, The University of Alberta is very much a part of the Edmonton community.

But seldom are numbers by themselves reliable or meaningful indicators of belonging, of participating, of contributing to the *life* of a community. No one can tell just how many staff members are involved in community projects or actively support Edmonton's cultural life. We can guess that such participation exists in average and in many cases above average quantities. Indeed, it has

SENATE ANNOUNCES 1973-74 SCHEDULE

The fall meeting of the University Senate will be held Friday, September 28 at 9:30 a.m. at Lister Hall. There will be a sign in the main lobby directing members and visitors to the meeting room.

The morning session will be devoted to reports from standing and Senate committees and task forces. A film on undergraduate student residence life will also be shown. At the afternoon session, beginning at 1:45 p.m., the membership will hear four papers on "The Governing of the University." They will be presented by W. D. NEAL, Vice-President (Planning and Development); CALVIN LEE, MLA for Calgary-McKnight; PETER FREEMAN, President of the AASUA; and KEN SMITH, Secretary of the Graduate Students' Association. A discussion will follow.

Luncheon will be served at noon. Both sessions are open to the public.

The Senate also will meet November 23 at Red Deer College, March 8, and May 10.

LARGE TURNOUT EXPECTED AT 1973 HOMECOMING

A record number of alumni are expected to attend Homecoming '73, to be held on campus next month. Members of the silver and gold classes ('48 and '23) have taken an active part in planning the Homecoming events, which will begin Friday, October 26 with a "Meet the Pros" wine and cheese party at the Faculty Club.

There will be a luncheon Saturday, October 27 at "The Ship" in Lister Hall before the Golden Bears' football game with The University of Calgary Dinosaurs. The Homecoming banquet and ball, also in Lister Hall, will be held Saturday evening.

Tickets for all events are available at the Alumni office, 602 Students' Union Building.

READ ON . . . CANADA!

This is the slogan for Young Canada's Book Week, to be held this year November 15 to 22, sponsored by the Canadian Book Publishers' Council and the Canadian Library Association. This year, too, the event is to be an all-Canadian celebration, with FARLEY MOWAT as patron and a book of 27 carefully selected Canadian books. Colorful posters, booklists, patron's message, bookmarks, seals, lapel stickers, Book of the Year Award lists, etc. can all be purchased, separately or in pre-assembled kits, at low prices from the Canadian Library Association, 151 Sparks Street, Ottawa.

In connection with the publicity for Young People's Book Week, the Canadian Materials

Committee of the Canadian School Libraries Association has announced the publication of *Canadian Materials 1971*, an annotated awareness list for elementary and secondary school resource centres of print and non-print materials. The Committee says that although the lack of Canadian materials has long been decried as a national calamity, *Canadian Materials 1971* should go far towards showing that the picture is not so black as it has been painted. "A glance through the pages of the list," they say, "will illustrate dramatically that Canadian materials are being produced and are readily available." It is hoped that the list will encourage the use of Canadian materials, thereby increasing both the quality and quantity of their production. It is available from the Canadian Library Association priced at \$3.25; libraries are allowed a discount of 10 percent.

EDMONTON CHAMBER MUSIC SOCIETY

The Edmonton Chamber Music Society will open its 1973-74 subscription concert series on Wednesday, October 24 with the Cleveland Quartet playing works by Beethoven, Sergei Slonimsky, and Mendelssohn in Convocation Hall at 8:30 p.m.

Other concerts in this year's series will be given by the Duo Perret-De Zayas (voice and lutes) on November 28; the Edmonton Chamber Music Players on January 9; The University of Alberta String Quartet on February 13; The Richards Woodwind Quintet on March 6; and the Oxford String Quartet on April 3.

All concerts are on Wednesday nights, in Convocation Hall in the Arts Building at 8:30 p.m. Admission to all concerts is by season membership in the Society. Season tickets are now on sale at the Information Desk, Students' Union Building; the Department of Music, room 3-82 Fine Arts Building; Canadiana Gifts, 10414 Jasper Avenue; or by mail from the Society at 11743 83 Avenue (telephone 439-6823). Season tickets for all six concerts are \$12, with special \$5 rates for senior citizens (over 65) and full-time students. The series was completely sold out last season.

NOTICES

OFFICIAL OPENING PLANNED FOR HUMANITIES CENTRE

The official opening of the Humanities Centre will be held Thursday, September 27 at 2 p.m. in the second-floor lobby of the building.

The master of ceremonies will be A. A. RYAN, Provost and Executive Assistant to the President. The official address will be delivered by WALTER H. JOHNS, Professor Emeritus of Classics and former President of the University, at 11 a.m. in Lecture Theatre 1.

Following the ceremonies, guests will be given a tour of the building and refreshments will be served.

MIXED CURLING

The University of Alberta Non-Academic Staff Association invites members interested in mixed curling to submit their names to DENNIS NOLIN, 5-29 Mechanical Engineering Building.

Curling is held on Mondays from 7 to 9 p.m. at the rink in the basement of the Students' Union Building. Fees are \$25 per person and must be paid by October 5. Curling will start Monday, October 15.

For further information call Mr. Nolan at 432-2923 or BRIAN MC CALLUM at 432-3228.

FACULTY WOMEN'S CLUB

The Faculty Women's Club will be holding a luncheon at the Faculty Club on Thursday, October 18 at 12 noon. The guest speaker will be MRS. ROSS MUNRO, member of the University Senate.

Tickets are \$3 each and are available from BARBARA HOROWITZ, 434-5696.

EXTENSION COURSES

"Yesterdays women: topics in the history of Canadian women" is a course being offered this fall by the Department of Extension. It will be held during six Tuesday afternoons from 1:30 to 3:30 p.m. beginning October 23.

LYDIA SEMOTUK, Administrative Assistant in the Department of Extension, will conduct the course, which will deal with such topics as "The women of New France," "Impressions of pre-Confederation Canada," "The opening of the west," "The Canadian suffrage movement," and "Canadian women and the world wars." Ms. Semotuk received her MA in political science from this University and is a member of the Historical Society of Alberta.

The fee is \$20 including books and materials, and registrations are being accepted by the department in Corbett Hall, telephone 432-5067 or 432-5066 during the day, or 432-3116 after office hours.

A ten-week course in Improving Community Group Effectiveness will be offered by the department on 10 Thursday evenings from 7 to 10 p.m. beginning October 11. It is designed for leaders and members of community leagues, home and school associations, community action groups, lay boards, service clubs etc.

RICHARD GLADE, Assistant Professor of Recreation Administration, will conduct the course which will deal with decision making and problem solving in a group, creating and maintaining group member motivation, power

and influence, and leadership. The fee is \$45.

Registrations are now being accepted at the department, telephone 432-3035 during the day, or 432-3116 after office hours.

ACU BULLETIN OF CURRENT DOCUMENTATION

The Association of Commonwealth Universities (ACU) publishes the *Bulletin of Current Documentation* five times a year, in February, April, June, October, and December. The annual subscription rate in Canada is \$5, including postage.

Among abstracts in the June issue, as an example, are those taken from the following documents: *Adult Education: A Plan for Development*, a report by a Committee of Inquiry appointed by the Secretary of State for Education and Science (UK); "Part-time degree studies; what is their present status?" *University Affairs* (Association of Universities and Colleges of Canada [AUCC]); Report of the AUCC Standing Committee on the Status of Women (Canada); Creating the African University: Emerging Issues of the 1970s (Association of African Universities); and the Fifth Report of the Australian Universities Commission, 1972 and the Third Report (1973-75) of the Australian Commission on Advanced Education.

Subscriptions for the *Bulletin* should be sent to the Association of Commonwealth Universities, 36 Gordon Square, London WC1H 0PF.

SINGERS MOVE TO NEW LOCATION

The Richard Eaton Singers will henceforth be holding their weekly meetings in the Choral and Opera Room, 129 Fine Arts Building, 112 Street and 88 Avenue. Auditions and registration of former members will take place there on Tuesday, September 25 between 7 and 8 p.m. Male voices are especially needed.

SABBATICAL LEAVE

The following notice has been received from BRIAN MC DONALD, Assistant to the President.

Applications for 1974-75 sabbatical leave should be submitted, through department chairmen to deans and directors, no later than October 12, 1973. A faculty member with tenure is eligible for a year's sabbatical after serving the University for six years, or after serving for six years following a previous period of leave for which financial assistance was provided by the University; full-time service at another university immediately prior to appointment at this University may be accepted to a maximum of two years of the total qualifying period of six years.

A faculty member with tenure is eligible for a half-year sabbatical leave after serving the University for three years or after serving for three years following a previous period of leave for which financial assistance was provided by the University. Service at another

institution does not qualify in half-year sabbaticals.

Application forms and further information may be obtained from Mr. McDonald, Office of the President, telephone 432-4955.

BOOKS

■ *An Interdisciplinary Investigation of Fort Enterprise, Northwest Territories, 1970*, edited by TIMOTHY C. LOSEY, Research Archaeologist in the Department of Anthropology, has been published by the Boreal Institute for Northern Studies. The book contains 106 pages of text illustrated throughout with half-tones and line drawings. It is priced at \$4 and is available from the Boreal Institute, room 401, centre wing, Biological Sciences Centre, telephone 432-4512.

■ *Speech in the English Novel* by N. A. PAGE, Associate Professor of English, has recently been published by Longman of London as No. 8 in their "English Language Series."

VISITORS

■ GERALD V. GRANT, Senior Lecturer, Graduate School of Business Administration, University of Witwatersrand, South Africa, presented a workshop to the Department of Sociology and the Faculty of Business Administration and Commerce.

■ A. G. WALKER of the University of Liverpool gave a colloquium to the Department of Mathematics.

■ A. D. BOARDMAN of the University of Salford gave a seminar to the Theoretical Physics Institute.

PEOPLE

■ DOUG BURNS, Assistant Registrar and Admissions Officer, is presently serving as Project Director for a seven-country Workshop on Scandinavian Education. Representatives from 22 universities in Canada and the United States are participating as members of five teams, each visiting one of the Scandinavian countries. Following the visits, the members will attend a conference to be held in Bergsjo, Norway. At the conclusion of the conference, a report will be prepared for distribution to all universities and post-secondary educational institutions involved in exchanges with the Scandinavian countries.

■ R. S. MAC ARTHUR, Professor of Educational Psychology, recently participated in the Vth International Symposium on the Biology of Circumpolar People, held in Reykjavik, Iceland. The Vth Symposium is now drawing together, for publication, research conducted over the past four years by investigators from

eleven countries, with the Eskimos of Alaska, Canada, and Greenland; the Lapps of Norway and Finland; and the Ainu of Japan. This research has been part of the Human Adaptability Section of the International Biological Programme.

■ At the recent Canadian Conference of Metallurgists held in Quebec City, papers were presented by M. L. WAYMAN, Professor of Mineral Engineering, and by F. H. VITOVEC, Chairman of the department. Papers were also presented by two former graduate students of the department, D. H. ANDREASEN and R. L. PROWSE.

■ JOHN G. PATERSON, Professor of Educational Psychology, has made a half-hour film on emotionally disturbed children, which was shot at the Westfield Diagnostic and Treatment Center. Graduate students WAYNE HOWARD and HELEN MC LEOD were his collaborators. The film has received quite a wide circulation and has twice been broadcast nationally by the Canadian Broadcasting Corporation.

■ At the American Psychological Association convention held in Montreal in August, WILLIAM J. BAKER, Professor of Linguistics, chaired a session and presented a paper. J. RAYMOND REID, a graduate student in that department, also presented a paper.

■ Under a grant from the Canada Council a National Conference on the Three or Four Day Work Week was organized on this campus during July. Over 150 delegates attended from all over the country. Papers were presented by G. S. PAUL, Assistant Professor of Sociology, CHARLES W. HOBART, Professor of Sociology, S. M. A. HAMEED, Professor of Business Policies, E. J. CHAMBERS, Dean of Business Administration and Commerce, chaired a session and was one of the speakers at the banquet. Professors KAROL KROTKI, ALEXANDER MATEJKO, STUART MC FADYEN, BAHU ABU LABAN, SEHA TINIC, DORIS BADIR, and BRUCE MC KELLIPS were discussants in various sessions.

■ H. JACKSON, Acting Chairman and Associate Professor of Food Science, has been invited to present a paper at the first International Symposium on *Vibrio parahaemolyticus* being held in Tokyo this week. The symposium is sponsored by the Toxic Micro-organisms Panel, US-Japan Co-operation on Development and Utilization of Natural Resources (UJNR).

■ N. C. BHATTACHARYA, Professor of Educational Foundations, participated by invitation in a special conference on the Philosophy of Education organized by the Royal Institute of Philosophy, London. The conference was held at the University of Exeter, England, during September. Dr. Bhattacharya's trip was made possible by

- grants from the Canada Council and from this University.
- T. H. PATCHING, Professor of Mineral Engineering, was co-chairman of the 25th Canadian Conference on Coal, which was held this week in Victoria, British Columbia.
- D. D. BETTS, M. B. RUSKAI, and J. STEPHENSON, all of the Department of Physics, each read a scientific paper at the International Conference on Thermodynamics and Statistical Mechanics held in Amsterdam during August. As Chairman of the International Commission on Thermodynamics and Statistical Mechanics, Dr. Betts also delivered an opening address of welcome. Dr. Betts had read a paper at the International Conference on Magnetism, in Moscow, the previous week.
- J. R. ROYCE, Director of the Centre for Advanced Study of Theoretical Psychology, has returned from sabbatical residence at the Educational Testing Service, Princeton, New Jersey. Dr. Royce recently participated in two symposia at the Convention of the American Psychological Association in Montreal, where he chaired one discussion and acted as a discussant in another. Prior to this meeting Dr. Royce had delivered an invited paper to the North Atlantic Treaty Organization Advanced Study Institute, in Wales.
- VIOLET ARCHER, Professor of Music, has had her music performed widely in North America during the last few months. In April her Two Songs for Soprano and Clarinet were performed in a recital at the University of Illinois, Urbana-Champaign campus. In May her Twenty-Third Psalm was sung at the annual concert of the Long Beach, California, chapter of Mu Phi Epsilon. In June three songs, settings of poems by DOROTHY LIVESAY, were broadcast by CKUA. In July the CFRN television program "Feature Artist" included an accordian transcription of her Chorale Improvisation on O Worship the King by NELLY PERUCH, and in August her Four Moods for Piano were performed at Bishop University's Centennial Theatre in Lennoxville, Quebec. Dr. Archer has been invited by the Department of Music of Queen's University to place a representative group of her works in its Canadian Music Library.
- LESZEK A. KOSINSKI, Professor of Geography, chaired a meeting of the International Geographical Union Commission on Population Geography, in Liege, Belgium during August. It was attended by 20 participants from various countries. Two special reports were published by the Commission on this occasion — *Population Geography, 1973* by J. CHR. HANSEN and Dr. Kosinski (Bergen, 1973), and *Population Mapping, 1973* by

I. B. F. KORMOSS and Dr. Kosinski (Bruges, 1973).

■ RAO V. DUKKIPATI, Postdoctoral Fellow in the Department of Mechanical Engineering, was the author of seven papers presented at the first International Symposium on Linkages and Computer Methods, held in Roumania. These papers have been published in the proceedings of the symposium. Dr. Dukkipati also participated in the two-week summer workshop for college teachers in engineering design of machine mechanisms for improved productivity and cost effectiveness, sponsored by the National Science Foundation and held on the campus of Oklahoma State University in July and August.

■ N. A. PAGE, Associate Professor of English, recently toured West Germany at the invitation of the British Council, and lectured at universities and institutes in Freiburg, Stuttgart, Erlangen, Hamburg, Kiel, and Berlin.

THIS WEEK AND NEXT

Listings must reach the Editor by 9 a.m. the Friday prior to publication. Written notification is preferred. Compiled by NORMA GUTTERIDGE, 432-4991.

20 SEPTEMBER, THURSDAY

National Film Theatre

7 p.m. *Pather Panchali/Father Panchali* (India, 1954) the third film in the trilogy about the boy Apu. Bengali with English subtitles. Southgate Library Theatre. *Also showing at the Centennial Library Theatre at 7 p.m. Friday, 21 September.* Admission free at both locations.

Volleyball

And 21 September. Golden Bears vs. Dufen, West Germany. Main Gymnasium.

21 SEPTEMBER, FRIDAY

Faculty Club

Downstairs. TGIF—Mexican fiesta. Empanadas, frijoles refritos, guacamole, jalapeno corn bread, enchiladas, and flan. \$3.25. Strolling musicians, Sound Investment.

Student Cinema

6:30 and 9 p.m. *Play It Again Sam* with Woody Allen. Students' Union Theatre. Advance tickets at SUB Information Desk, 50 cents, or \$1 at the door.

Graduate Students' Association

8 p.m. to 1 a.m. *And every Friday night.* The Graduate Students' Social Centre is open to all graduate students and their guests. Beer, wine, food. 11039 Saskatchewan Drive.

22 SEPTEMBER, SATURDAY

Field Hockey

And 23 September. University of Alberta Invitational. Varsity Stadium.

Faculty Club

Downstairs. Casual dining at the patio grill, 6 to 9 p.m.

Upstairs. Regular dinner menu served 6 to 10 p.m., dancing 9 p.m. until midnight.

Student Cinema

And 23 September 6:30 and 9 p.m. *Billy Jack* with Tom Laughlin. Students' Union Theatre. Advance tickets at SUB Information Desk, 50 cents, or \$1 at the door.

26 SEPTEMBER, WEDNESDAY

Faculty Club

Downstairs. "Barbecue your own" at the patio grill 5 to 8 p.m.

Upstairs. Wine tasting carousel 7 to 10 p.m. Complete meal with wines to complement each course — crepes, sole Marguerite, steak au poivre, pastry paradise. \$7.50.

28 SEPTEMBER, FRIDAY

Faculty Club

Downstairs. TGIF—pit barbecue, western style. Barbecued beef, baked beans, salad bar, peach cobbler. \$3.25.

29 SEPTEMBER, SATURDAY

Football

2 p.m. Golden Bears vs. the University of British Columbia. Varsity Stadium.

Faculty Club

Downstairs. Casual dining at the patio grill 6 to 9 p.m.

Upstairs. Regular dinner menu served 6 to 10 p.m., dancing 9 p.m. until midnight.

Edmonton Symphony Orchestra

8:30 p.m. And 30 September at 2:30 p.m. Conductor: PIERRE HETU; guest artist: GARY GRAFFMAN, pianist. Program: Overture to *La Gazza Ladra*, Rossini; Symphony No. 9 in C ("The Great"), Schubert; Concerto for Piano and Orchestra No. 1 in B Flat Minor, Tchaikovsky. Jubilee Auditorium. Ticket information number, 433-2020 (24 hours a day).

1 OCTOBER, MONDAY

Seminar-in-the-Round

2 p.m. "The analysis of literature as a psychological method" by HAROLD G. MC CURDY, University of North Carolina. Sponsored by the Centre for the Advanced Study of Theoretical Psychology. Biological Sciences Building, room P319. The public is invited.

EXHIBITIONS

Edmonton Art Gallery

Until 23 September. Students from one of the adult art classes of the Gallery will be showing their work in the foyer of the classroom areas.

Until 2 October. "WHYNONA YATES, wall hangings and woven sculpture."

Until 30 September. "DOROTHY KNOWLES, paintings and watercolors." This Saskatchewan artist explores the possibilities of the prairie landscape.

Until 15 October. "SYDNEY TILLIM, paintings." Tillim aims at the great tradition of historical figure painting.

PERSONAL NOTICES

Notices must be received by 9 a.m. the Friday prior to publication. Rate is ten cents per word for the first insertion and five cents per word for subsequent insertions ordered with the first. Minimum charge is \$1. To avoid billing, notices MUST BE PAID IN ADVANCE. For assistance or order blanks, telephone 432-4991.

Accommodation available

FOR SALE—Beautiful home, Windsor Park. Large lot, four bedrooms, den, two kitchens, two full bathrooms, sprinkler system, open fireplace, large family room, double insulated garage, shag carpet, many extras. Downstairs presently rented for \$175/month. \$65,000. 7% first mortgage. 8711 120 Street. 439-5562.

FOR RENT—Two-bedroom bungalow, Windsor Park; third bedroom, second bathroom downstairs; double garage, no furniture; \$275 monthly, 433-7472.

FOR RENT—Large bed-sitting room. Male; no cooking. Very close to University. Telephone 433-8410.

GENTLEMAN WANTED—23-30 to share modern 3 bedroom apartment with 2 others. Reasonable. 439-4625.

FOR RENT—Three bedroom apartment near Westmount. Refrigerator and stove, carpets, drapes, plug-in parking. \$180/month. 455-0236.

FOR RENT—Furnished, self-contained apartment, close University. Permanent, responsible gentleman. References. 433-4358.

FOR SALE—Three-bedroom home, 15 minute drive to University. This property is ideal for a small family which enjoys a sauna, a rumpus room, a double garage and the beauty of real wooden beams. Priced at \$33,000 with financing to suit purchaser. Contact owner at 432-3742 or 1-387-4382.

FOR RENT—University area, quiet, furnished upstairs apartment: living-room, dinette, kitchenette, bath, garage. \$150. Phone 433-3749; 433-3357 evenings.

FOR SALE—4-plex within walking distance (east) of University. Each 2 bedroom suite self-contained. Tenant parking at rear. Coin operated washer and dryer. Some redecorating could augment revenue.

Call David Van Stolk at 436-1295 or 433-9328, City Trust Real Estate.

FOR RENT—December 20, 1973-August 20, 1974: furnished three-bedroom bungalow, finished basement, walking distance University. Call evenings, 436-5325.

TO SUBLLET—Row house Michener Park, two bedrooms, moderately furnished. Available January 1 - April 30. Telephone 434-4572, 5-8 p.m.

Accommodation wanted

WANTED—Two-bedroom apartment near University, walk-up or high-rise, preferably furnished. Telephone 432-3953.

Automobiles and accessories

FOR SALE—1970 Cougar XR7. Excellent condition. Power equiped. 466-5232 evenings.

FOR SALE—1965 Citroën, \$400 or nearest offer. Ian, 433-6944, 432-4158.

Goods and services

FOR SALE—8' x 10' turquoise shag rug, \$110. 487-3746.

REQUIRED—Teacher's Aide commencing October 1. Some teacher training and experience involving children necessary. Please reply in writing to: Westbrook Kindergarten Society, 4107 120 Street, before September 25th.

SMALL PRIVATE ART CLASSES—for children, beginning October. Interested persons telephone 439-1534.

WANTED—Teak furniture, contemporary china and flatware. 488-7591 or 432-3943.

BRASS, PIANO AND THEORY—Music instructor giving lessons, \$10 per month. Telephone 469-2475 after 5 p.m.

FOR SALE—b/w 17" portable TV, \$45. Also b/w 17" console TV, \$15. Telephone 432-5638; evenings 435-1155.

FOR SALE—Chesterfield and matching chair, two dressers, single bed, roll away bed. 484-6531.

PROGRAMMING SERVICES—Experienced Programmer/Analyst available for odd programming jobs. For information, contact Ria Clements, 454-6833.

WANTED—ride from Sherwood Park. Telephone Jeanette, 433-9852 after 5 p.m.

EXCURSION FARES—recommend October 1 coast to coast; so how about those business trips, conferences, etc? We arrange domestic bookings, i.e., Canada and U.S., as well as international ones, and attend to flights, hotels and car rentals. For further information call Iris Rosen & Associates, 488-8181.

BABYSITTER WANTED—University area. Weekdays 8:30 to 4:30. Rosa, 433-1281, 433-7840.

FOR SALE—Reconditioned Inglis washer and dryer. Used for three months, excellent condition, must sell. \$240 or best offer. 434-0034.

FOR SALE—Portable typewriter; b/w TV; electric relaxing chair, 435-7724.

WE CAN OFFER mature, loving day-care in private home. Pre-school training available. References. 466-8561.

GOING AWAY FOR CHRISTMAS? How about planning your trip now? Scandinavia, England, Hawaii, Mexico, or even to Vancouver or the Maritimes.

Bookings get heavy at that time so why wait?

Book now to avoid disappointment; it doesn't cost any more. Call Iris Rosen at 488-8181.

PATRICIA D. SMY, LRAM (singing teacher), ARCT (speech arts and drama). *Instruction in voice production* for singing and speech. Movement, mime, and acting classes and individual tuition. Children and adults. *Special pre-school and grade 1 music classes* in mime, movement, and music including creative drama, movement and singing. Adjacent campus, 439-5260.

PLUMBING—FOR FREE ESTIMATES on basement bathrooms, repairs, alterations etc. call 439-4670, anytime.

DON'T MISS IT—Saturday, September 22nd: Parkallen Community League is holding a garage and bake sale at the rink shack, 65 Avenue and 111 Street, 10 a.m. onward.

POSITIONS VACANT

NON-ACADEMIC STAFF

Applicants are sought for the following positions. The Office of Personnel Services and Staff Relations (Room 121, Administration Building) will provide further details to interested persons, who are not to approach the department directly.

Clerk Typist II (Temporary) (\$354-\$453)—Pharmacy Clerk Typist II (2 positions) (\$354-\$453)—Extension Clerk Typist II (\$354-\$453)—Household Economics; Biochemistry; Housing & Food Services; English Clerk Typist III (\$412-\$523)—Educational

Psychology; Physical Plant

Clerk Steno I (\$338-\$431)—Cancer Research Unit

Clerk Steno I (Part-time) (\$169-\$216)—Medical Laboratory Science

Clerk Steno II (\$372-\$475)—Soil Science; Psychiatry; Physical Education; Housing and Food Services; Animal Science

Clerk Steno III (Half-time) (\$246/month)—Paediatrics

Clerk Steno III (\$431-\$549)—Medicine; Mineral Engineering

Library Assistant I (\$413-\$549)—Collège Saint-Jean Publications Clerk II (\$499-\$637)—Entomology

Keypunch Operator (\$392-\$499)—Computing Services Bookkeeper II (\$431-\$549)—Civil Engineering Accounts Clerk II (\$475-\$606)—Office of the Comptroller

Physics Technologist I (\$606-\$773)—Physics

Biology Technologist I (\$606-\$773)—Genetics

Research and Planning Analyst IV (\$701-\$895)—Institutional Research and Planning

Electronics Technician I (\$549-\$701)—Technical Services Internal Audit Assistant (\$606-\$773)—Office of the Comptroller

Food Technician I (\$523-\$668)—Household Economics

Physics Technician I (\$523-\$668)—Physics

Research Assistant (Negotiable) (Trust)—Psychology

Biochemistry Technician (\$523-\$668)—Pharmacology

Registration Officer (To be established)—Art and Design

Food Technician I (Sessional) (\$523-\$668)—Household Economics

Assistant Microanalyst (To be established)—Geology

Biochemistry Technician (\$523-\$668)—Biochemistry

Civil Technician I (\$523-\$668)—Civil Engineering

Audiovisual Technician III (\$701-\$895)—Audiovisual Media Centre

Biochemistry Technologist I (\$606-\$773)—Dentistry

Duplicating Equipment Operator II (\$412-\$523)—Duplicating

Machinist Technician II (\$637-\$701)—Mineral Engineering

FOLIO

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Marcy McKissock, *Editor*

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